



ENTERPRISE INFORMATION WORLD
Creating the Information-Centric Enterprise

Data Protection 2010

Building a Future-Proof Data Protection Strategy

Presented by:

Miklos Sandorfi, CTO, SEPATON

Agenda

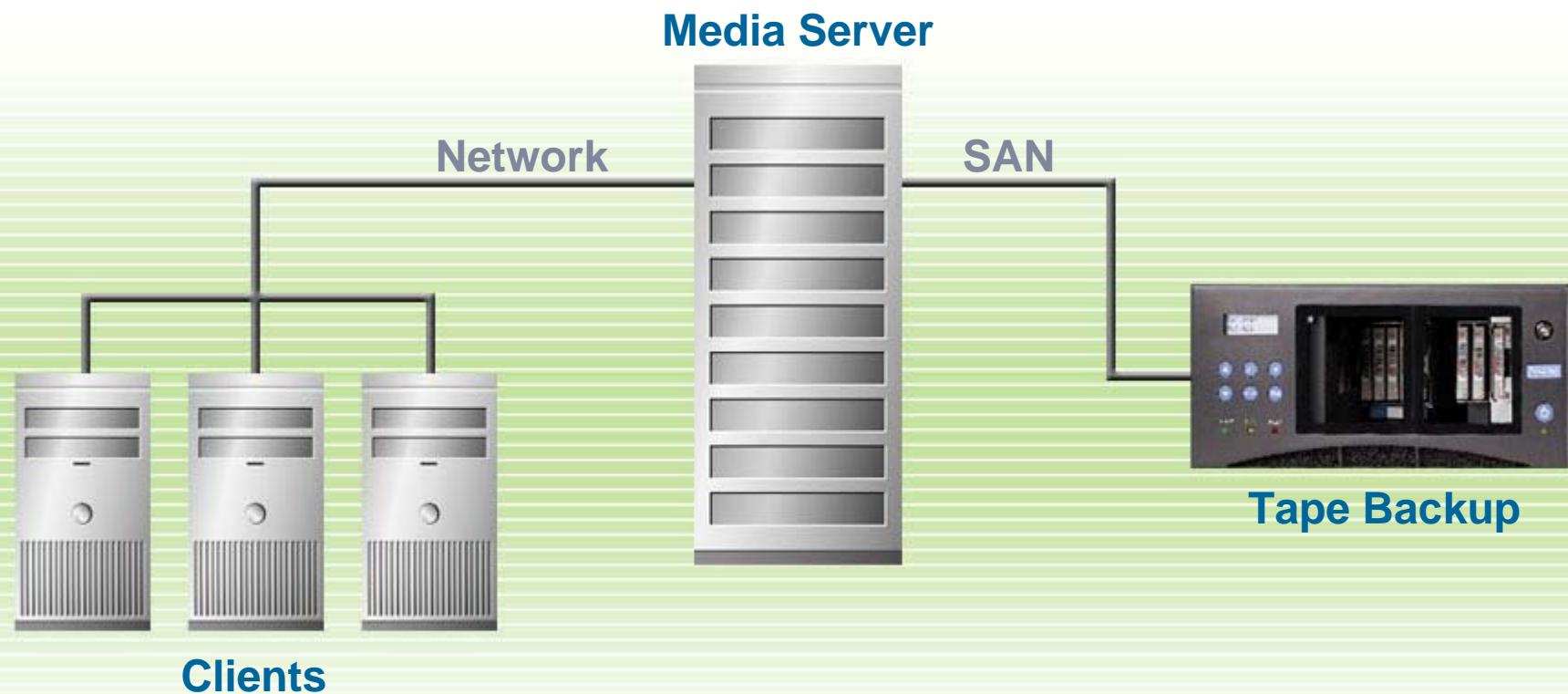
- ✓ **The data protection evolution**
- ✓ **Today's game-changing technologies**
- ✓ **The synthesis of disparate technologies**
- ✓ **Positioning yourself for the future**
- ✓ **Q&A**

The Evolution of Primary Storage

- ✓ **Primary disk storage began with the proliferation of point solutions for various business needs**
 - ◆ Internal disks
 - ◆ Dedicated, non-shared storage arrays
- ✓ **Eventually, storage consolidation was enabled**
 - ◆ Enterprise disk arrays solved numerous business challenges
 - ◆ Holistic management possible for multiple policies and applications
 - Mirroring, snapshots, thin provisioning

Secondary Storage Developing on Same Path

Traditional Backup/Recovery Model



From Secondary Storage to Data Protection

- ▼ **Numerous drivers for advancing from simple secondary storage (i.e. tape, D2D) to intelligent data protection**
 - ◆ Regulatory compliance – Legal obligations to protect and maintain data are increasing
 - ◆ eDiscovery – Rapid data retrieval mandatory for judicial compliance
 - ◆ Internal SLAs, RTOs and RPOs – Business evolution driving more data and faster access to it at any point in time
 - ◆ Resource constraints – Traditional solutions are resource intensive and prone to failure

Game-Changing Technologies: CDP

- ✓ **Continuous Data Protection (CDP) makes a copy of each bit of data (byte, block or file level) as it's written to disk**
- ✓ **Ideal for transaction-oriented, business-critical applications (i.e. Exchange, financial systems, etc.)**
- ✓ **Delivers rapid, accurate restore to any point in time**
- ✓ **Cost-benefit analysis doesn't support CDP with all applications**
 - ◆ Management resources, added disk footprint, and acquisition costs can add up

Game-Changing Technologies: VTL

- ✓ **Virtual Tape Libraries (VTLs) emulate physical tape libraries**
 - ◆ Seamlessly plug into existing backup infrastructure
 - ◆ High performance, reliable backup targets with backup/recovery speeds of up to 4800 MB/sec
- ✓ **VTL is easily managed by current backup software**
- ✓ **VTL vendors leading the charge with enhanced data protection applications**



Game-Changing Technologies: Remote Replication

- ✓ Electronically “vault” data at offsite locations
- ✓ Eliminate tape handling/storage costs and risks
- ✓ Facilitate near instant data recovery in DR scenarios
- ✓ Also facilitates remote office data protection
- ✓ Effectively pushing data over network may require additional bandwidth, tools, or data de-duplication



Game-Changing Technologies: Data De-duplication

- ✓ **Backup only changed data (also referred to as single instance storage)**
- ✓ **Varying approaches**
 - ◆ Hash-based vs. ContentAware™
 - ◆ In-band vs. out-of-band
 - ◆ Forward vs. reverse referencing
 - ◆ On/off vs. configurable
- ✓ **Enabling the economics of disk-based data protection to make sense for everyone**

Game-Changing Technologies: Search

- ✓ **Having a searchable secondary storage device advances unified data protection**
 - ◆ Supports compliance and eDiscovery
 - ◆ Eliminates need to separate backup and archive systems
- ✓ **Enables companies to “Google™” their data for selective file-level, application-level or policy-level restores**
- ✓ **Will emerge in 2008 as next big advance, following de-duplication**

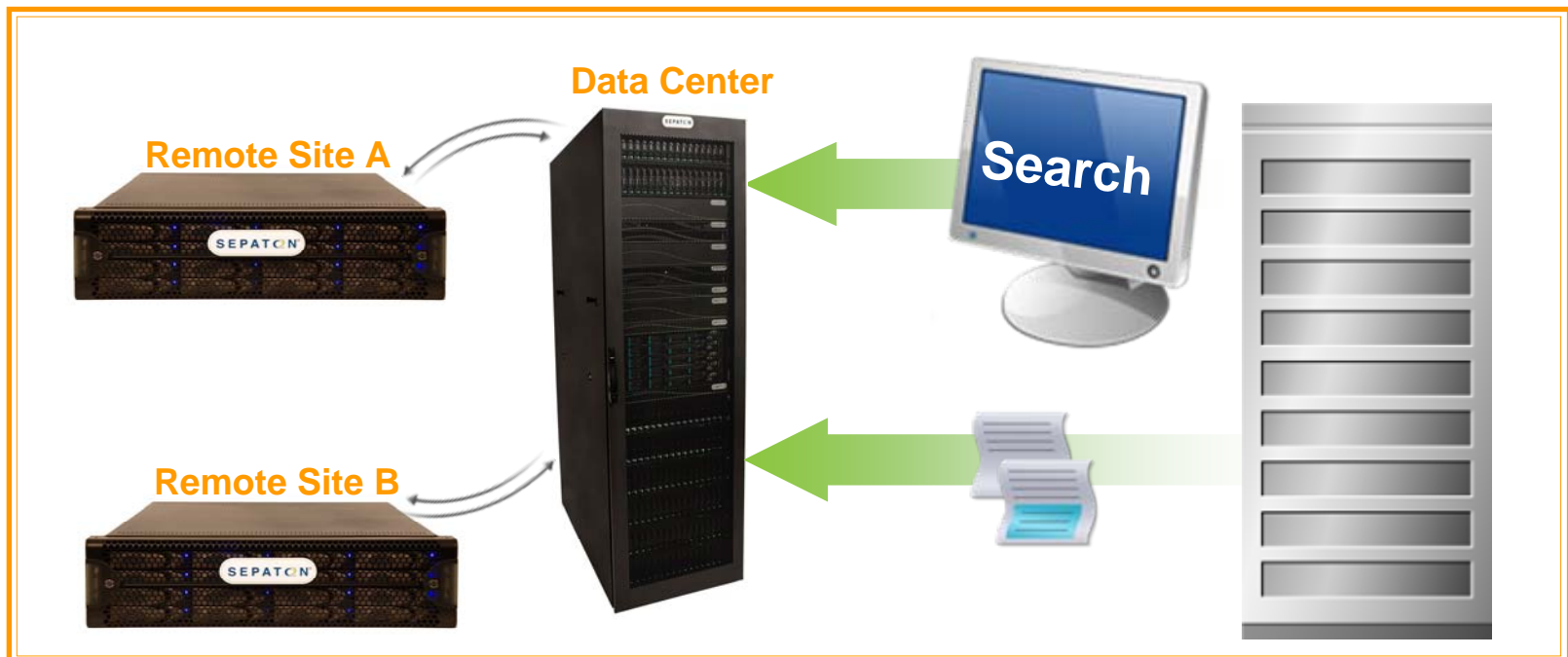
Search my data

Towards Unified Data Protection

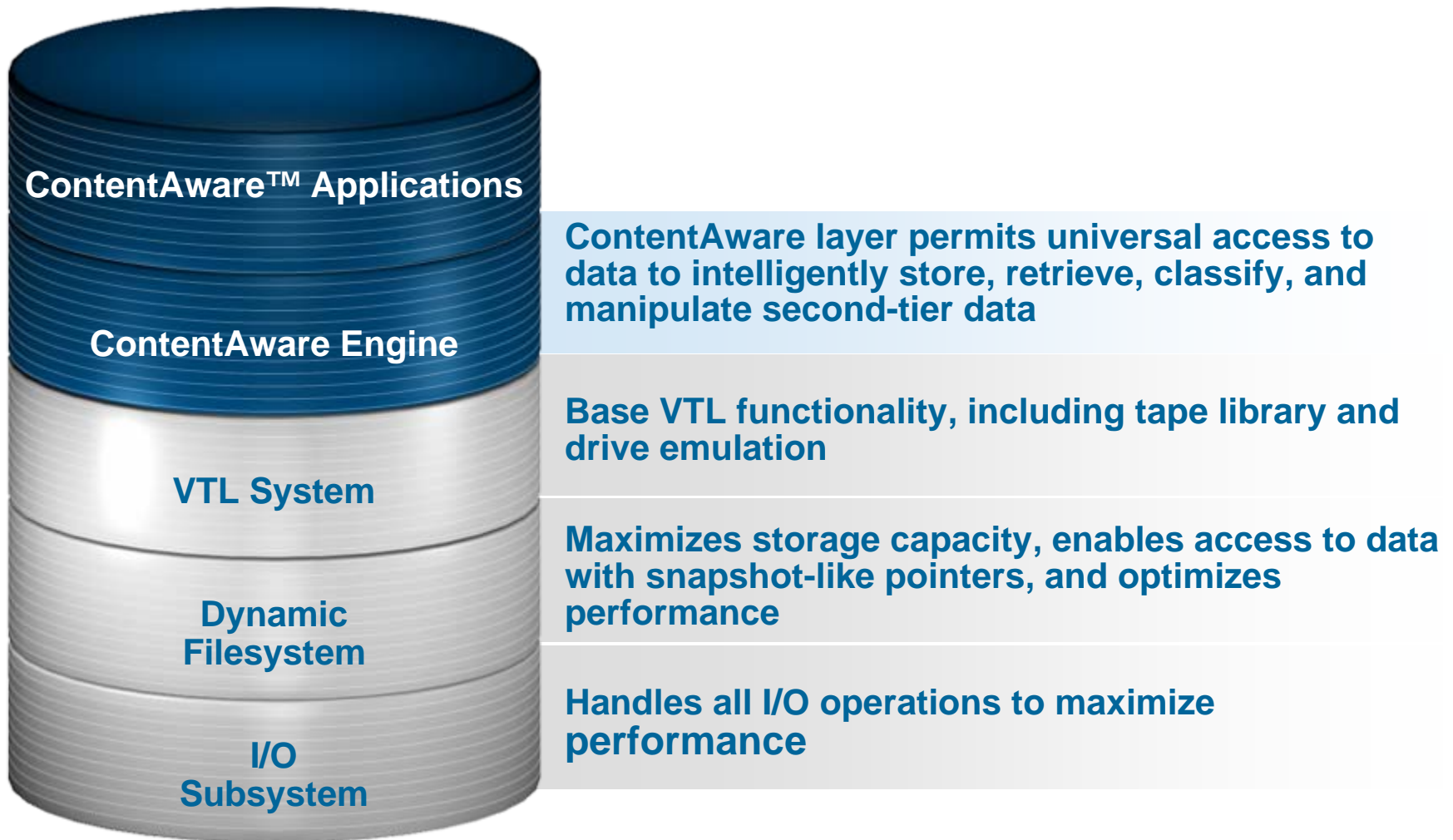
- ✓ **Industry unanimous on shortcomings of tape-based backup**
- ✓ **Disk-to-disk is an alternative, but doesn't get to an integrated, unified solution**
 - ◆ Bolting together numerous hardware and software products
 - ◆ Management required of each component
 - ◆ Multiple vendors contacts for support and expansion
- ✓ **Businesses want consolidation of secondary storage the way it occurred with primary**
 - ◆ Single management interface
 - ◆ No compatibility concerns

The Synthesis of Disparate Technologies

- ❏ VTL is the cornerstone for emerging technologies, including remote replication, de-dupe and search



Architecture to Support Growth



Business Problems Solved

- ❏ **Future-friendly, enterprise-class software and hardware are built from a solutions perspective**
 - ◆ Performance – Disk replaces tape; Scalable performance by adding nodes (no more boxes!)
 - ◆ Scalability – Increase capacity incrementally with more drives
 - ◆ Reliability – Redundant components, RAID, etc.
 - ◆ Ease of use – Web-based GUI; Single POC for support
 - ◆ Disaster recovery – Remote replication; Instant restores
 - ◆ Budget – Data de-duplication mitigates data growth
 - ◆ Functionality – Enhanced data management applications

Integrated solutions address core problems

Tapeless a Reality?



- ✓ **No consensus on whether eliminating tape from an environment makes sense**
 - ◆ Today's technologies make it a possibility
 - ◆ Most companies reluctant to completely abandon tape
- ✓ **Tape still makes sense for some purposes**
 - ◆ Economical for long-term storage of data that wouldn't require rapid recovery
- ✓ **Decision should be based on your internal and regulatory requirements – no wrong answer**

CitiStreet Case Study

✓ The Environment

- ◆ MA and FL datacenters backing up to large tape libraries

✓ The Forecast: *Data growth unmanageable*

- ◆ Regulations and internal SLAs demanding more data online for longer
- ◆ Tape management and failures draining resources

✓ The Solution: **SEPATON**

- ◆ A SEPATON S2100 VTL in each data center replicates to each other
- ◆ DeltaStor™ data de-duplication software to optimize capacity

✓ The Results

- ◆ Backup windows cut from 24-30 hrs to 4 hrs
- ◆ 6 weeks online retention
- ◆ De-duplication ratios of >100:1 mitigate hardware upgrades for several years
- ◆ Tape utilized for archive only with plans to go tapeless



Positioning Yourself for the Future

✓ Understand today's needs

- ◆ Review internal SLAs and regulations that are driving data growth and retention
- ◆ Analyze growth from various clients, departments, etc.

✓ Project future needs

- ◆ Regulations will only become more demanding
- ◆ Business recovery needs unlikely to decrease

✓ Understand today's solutions and where vendors are headed in the future

✓ Set priorities before making an investment

Setting Data Protection Priorities

- ✓ **Identify critical and secondary data protection needs/concerns**
 - ◆ Performance
 - ◆ Scalability
 - ◆ Compliance
 - ◆ Ease of management
 - ◆ Cost-effective
 - ◆ Relevance to future needs
- ✓ **Identify a provider that addresses all of your needs**
- ✓ **You don't have to make sacrifices on performance to achieve de-duplication, etc.**

Data Protection 2010

Unified data repository for:

- ◆ Compliance
- ◆ eDiscovery
- ◆ Searchable data recovery
- ◆ Instantaneous restores
- ◆ Seamless management of all backup data

Capacity-optimized for:

- ◆ Extended online retention
- ◆ Cost-effective scalability

Easily replicated for DR



Fast

Secure

Scalable

Reliable

Easy

Question & Answer

- ✓ For more information:
<http://www.sepaton.com>

- ✓ Contact me:
msandorfi@sepaton.com